AMENDMENTS TO THE CLAIMS

Please amend claims 1-15, 21-23 and 27-36 as follows.

1. (Currently Amended) A ~~system~~medium holding instructions executable in a computing device for modifying a model of a biological process ~~responsive~~in response to experimental results generated by an in situ experiment conducted on an experimental ~~platform~~device, the ~~system~~instructions comprising:

        instructions for a simulation engine generating an expected result from a model of the biological process; and

        instructions for an analysis environment in communication with said simulation engine, said analysis environment gathering data from ~~an~~said experimental ~~platform~~device and comparing the expected result to data gathered from said ~~platform~~experimental device.

2. (Currently Amended) The ~~system~~medium of claim 1 wherein said analysis environment outputs results of analysis performed by the analysis environment.

3. (Currently Amended) The ~~system~~medium of claim 2 wherein the analysis environment includes a graphical display for displaying the expected result generated by said simulation engine and the experimental data gathered from the ~~platform~~device.

4. (Currently Amended) The ~~system~~medium of claim 1 wherein said analysis environment generates an event signal when the difference between the expected result generated by the simulation engine and the data gathered from the ~~platform~~device exceeds a predetermined threshold.

5. (Currently Amended) The ~~system~~medium of claim 1 further comprising~~also holding~~ instructions for a modeling environment for constructing a model of the biological process.

6. (Currently Amended) The ~~system~~medium of claim 5 wherein said modeling environment includes a graphical user interface for accepting user commands and data to construct a model of the biological process.

7. (Currently Amended) The ~~system~~medium of claim 5 wherein said analysis environment is in communication with said modeling environment.

8. (Currently Amended) The ~~system~~medium of claim 6 wherein the analysis engine transmits to the modeling environment the data gathered from the ~~platform~~device.

9. (Currently Amended) The ~~system~~medium of claim 8 wherein the modeling environment uses the transmitted data to refine the generated model of the biological process.

10. (Currently Amended) The ~~system~~medium of claim 1 wherein said analysis environment gathers data from a microarray.

11. (Currently Amended) The ~~system~~ medium of claim 1 wherein said analysis environment gathers data from a ~~experimental device~~gene chip.

12. (Currently Amended) A method for modifying a model of a biological process responsive to experimental results generated by an in situ experiment conducted on an experimental ~~platform~~device, the method comprising the steps of:

    (a) conducting an in situ experiment;

    (b) accessing, by a simulation engine, a model of the biological process;

    (c) generating, by the simulation engine, an expected result based on the model of the biological process;

    (d) gathering data relating to the experiment; ~~and~~

    (e) comparing, by an analysis environment, the generated expected result to data gathered from said ~~experimental platform~~experiment; and

    (f) modifying the model of the biological process based on the data relating to the experiment.

13. (Currently Amended) The method of claim 12 further comprising the step of displaying, by the analysis environment, the expected result generated by said simulation engine and the experimental data gathered from said ~~platform~~experiment.

14. (Currently Amended) The method of claim 13 wherein the step of displaying comprises graphically displaying the expected result generated by said simulation engine and the experimental data gathered from said ~~experimental platform~~experiment.

15. (Currently Amended) The method of claim 13 further comprising the step of generating an event signal when the difference between the generated, expected result and the gathered data exceeds a predetermined threshold.

16. (Original) The method of claim 12 further comprising the step of accepting, via a modeling environment, user commands and data to construct a model of the biological process.

17. (Original) The method of claim 16 wherein the modeling environment accepts user commands and data via a graphical user interface.

18. (Original) The method of claim 16 further comprising the step of transmitting gathered data to the modeling environment.

19. (Original) The method of claim 16 further comprising the step of generating, by the modeling environment, a refined model of the biological process using the transmitted data.

20. (Original) The method of claim 12 wherein step (a) comprises conducting an in situ experiment using a microarray.

21. (Currently Amended) The ~~system~~method of claim 12 wherein step (a) comprises conducting an in situ experiment using an experimental device.

22. (Currently Amended) An article of manufacture having embodied thereon computer-readable program means for modifying a model of a biological process in response ~~responsive~~to experimental results generated by an in situ experiment conducted on an experimental ~~platform~~device, the article of manufacture comprising:

computer-readable program means for accessing a model of the biological process;

computer-readable program means for generating an expected result based on the model of the biological process;

computer-readable program means for gathering data relating to ~~the chemical~~an in situ experiment of the biological process conducted on ~~an~~ the experimental device; and

computer-readable program means for comparing the generated expected result to data gathered from said experimental ~~platform~~device.

23. (Currently Amended) The article of manufacture of claim 22 further comprising computer-readable program means for displaying the expected result and the experimental data gathered from said experimental ~~platform~~device.

24. (Original) The article of manufacture of claim 22 further comprising computer-readable program means for triggering an alarm when the difference between the generated, expected result and the gathered data exceeds a predetermined threshold.

25. (Original) The article of manufacture of claim 22 further comprising computer-readable program means for accepting user commands and data to construct a model of the biological process.

26. (Original) The article of manufacture of claim 22 further comprising computer-readable program means for accepting user commands and data via a graphical user interface to construct a model of the biological process.

27. (Currently Amended) The article of manufacture of claim 22 further comprising computer-readable program means for generating a refined model of the biological process using data gathered from the experimental ~~platform~~device.

28. (Currently Amended) A ~~system~~medium holding instructions executable in a computing device for modifying a model of a biological process in ~~responsive~~response to experimental results generated by an in situ experiment conducted on an experimental ~~platform~~device, the ~~system~~instructions comprising:

instructions for a simulation engine generating an expected result from a model of the biological process; and

instructions for an analysis environment in communication with said simulation engine, said analysis environment gathering data from ~~an~~ said experimental ~~platform~~ device and comparing the expected result to data gathered from said experimental ~~platform~~ device.

29. (Currently Amended) The medium~~system~~ of claim 28 wherein said analysis environment displays the expected result generated by said simulation engine and the experimental data gathered from the experimental ~~platform~~ device.

30. (Currently Amended) The medium~~system~~ of claim 29 wherein the analysis environment includes a graphical display for displaying the expected result generated by said simulation engine and the experimental data gathered from the experimental ~~platform~~ device.

31. (Currently Amended) The medium~~system~~ of claim 28 wherein said analysis environment further comprises an alarm that is triggered when the difference between the expected result generated by the simulation engine and the data gathered from the ~~platform~~ device exceeds a predetermined threshold.

32. (Currently Amended) The medium~~system~~ of claim 28 further comprising instructions for a modeling environment for constructing a model of the biological process.

33. (Currently Amended) The medium~~system~~ of claim 32 wherein said modeling environment includes a graphical user interface for accepting user commands and data to construct a model of the biological process.

34. (Currently Amended) The medium~~system~~ of claim 32 wherein said analysis environment is in communication with said modeling environment.

35. (Currently Amended) The medium~~system~~ of claim 34 wherein the analysis engine transmits to the modeling environment the data gathered from the experimental ~~platform~~ device.

36. (Currently Amended) The medium~~system~~ of claim 35 wherein the modeling environment uses the transmitted data to refine the generated model of the biological process.

37. (Withdrawn) A method for modifying a model of a chemical reaction responsive to experimental results generated by an in situ experiment conducted on an experimental platform, the method comprising the steps of:

(a) conducting an in situ experiment;

(b) accessing, by a simulation engine, a model of the chemical reaction;

(c) generating, by the simulation engine, an expected result based on the model of the chemical reaction;

(d) gathering data relating to the chemical experiment; and

(e) comparing, by an analysis environment, the generated expected result to data gathered from said experimental platform.

38. (Withdrawn) The method of claim 37 further comprising the step of displaying, by the analysis environment, the expected result generated by said simulation engine and the experimental data gathered from said experimental platform.

39. (Withdrawn) The method of claim 38 wherein the step of displaying comprises graphically displaying the expected result generated by said simulation engine and the experimental data gathered from said experimental platform.

40. (Withdrawn) The method of claim 37 further comprising the step of triggering an alarm when the difference between the generated, expected result and the gathered data exceeds a predetermined threshold.

41. (Withdrawn) The method of claim 37 further comprising the step of accepting, via a modeling environment, user commands and data to construct a model of the chemical reaction.

42. (Withdrawn) The method of claim 41 wherein the modeling environment accepts user commands and data via a graphical user interface.

43. (Withdrawn) The method of claim 41 further comprising the step of transmitting gathered data to the modeling environment.

44. (Withdrawn) The method of claim 41 further comprising the step of generating, by the modeling environment, a refined model of the chemical reaction using the transmitted data.

45. (Withdrawn) An article of manufacture having embodied thereon computer-readable program means for modifying a model of a chemical reaction responsive to experimental results generated by an in situ experiment conducted on an experimental platform, the article of manufacture comprising:

computer-readable program means for accessing a model of the chemical reaction;

computer-readable program means for generating an expected result based on the model of the chemical reaction;

computer-readable program means for gathering data relating to the chemical experiment; and

computer-readable program means for comparing the generated expected result to data gathered from said experimental platform.

46. (Withdrawn) The article of manufacture of claim 45 further comprising computer-readable program means for displaying the expected result and the experimental data gathered from said experimental platform.

47. (Withdrawn) The article of manufacture of claim 45 further comprising computer-readable program means for triggering an alarm when the difference between the generated, expected result and the gathered data exceeds a predetermined threshold.

48. (Withdrawn) The article of manufacture of claim 45 further comprising computer-readable program means for accepting user commands and data to construct a model of the chemical reaction.

49. (Withdrawn) The article of manufacture of claim 45 further comprising computer-readable program means for accepting user commands and data via a graphical user interface to construct a model of the chemical reaction.

50. (Withdrawn) The article of manufacture of claim 45 further comprising computer-readable program means for generating a refined model of the chemical reaction using data gathered from the experimental platform.